What is claimed is:

1. A method of manufacturing an EEPROM device, comprising:

forming a screen oxide film on a semiconductor substrate;

forming a first ion implantation mask defining a gate insulating film forming region on the screen oxide film;

performing a first ion implantation on the semiconductor substrate and the first ion implantation mask;

performing a first annealing of the semiconductor substrate;

removing the screen oxide film and the first ion implantation mask;

forming a gate oxide film on the semiconductor substrate;

forming a second ion implantation mask defining a gate insulating film forming region on the gate oxide film;

performing a second ion implantation on the semiconductor substrate and the second ion implantation mask;

performing a second annealing for the semiconductor substrate;

removing the second ion implantation mask; and

forming a tunnel oxide film on the gate oxide film.

2. The method of claim 1, wherein the gate oxide film has a thickness of 50 to 300Å

3. The method of claim 1, wherein the tunnel oxide film has a thickness of 50 to 100Å

4. The method of claim 1, wherein the first annealing is performed at a temperature of 1000 to 1050°C for 10 to 20 seconds.

5. The method of claim 1, wherein the second annealing is performed at a temperature of 1050 to 1150°C for 10 to 20 seconds.

6. The method of claim 1, wherein the first ion implantation is performed by implanting 31P ions with an ion implantation energy of 50 to 70KeV and dose of 2×10^{13} to 2×10^{14} ion/cm^2.

7. The method of claim 1, wherein the second ion implantation is performed by implanting 75As ions with an ion implantation energy of 60 to 85KeV and dose of 1×10^{14} to 1×10^{15} ion/cm^2.

8. The method of claim 1, wherein the screen oxide film has a thickness of 40 to 60Å